

# Mineral Industry Surveys

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## COBALT IN JANUARY 2006

U.S. cobalt consumption in January 2006 was 4% higher than consumption during December 2005, according to the U.S. Geological Survey. The amount of cobalt contained in U.S. imports of cobalt metals and chemicals was 27% higher in 2005 than that imported in 2004. The amount of cobalt contained in U.S. exports of unwrought cobalt and chemicals was 3% lower in 2005 than that of 2004.

**Update**

Prices for electrolytic cobalt, in dollars per pound from Platts Metals Week, are listed below.

<u>Date</u>	<u>Price range</u>
February 9	12.75-13.20
February 16	12.75-13.50
February 23	12.75-13.30
March 2	13.75-14.25
March 9	13.75-14.50
March 16	14.20-14.75

<u>Month</u>	<u>Average price</u>
February	13.06

TABLE 1  
U.S. REPORTED CONSUMPTION OF COBALT MATERIALS<sup>1</sup>

(Metric tons, contained cobalt)

Period	Metal <sup>2</sup>	Oxide and other chemical compounds <sup>3</sup>	Scrap	Total
2005:				
January	278	150	197	624
February	292	153	197	641
March	253	175	187	615
April	268	151	187	605
May	256	154	198	608
June	254	176	194	624
July	261	147	177	585
August	276	151	201	628
September	263	159	201	623
October	266	154	201	621
November	259	147	201	606
December	248	148	201	597
January-December <sup>4</sup>	3,170	1,860	2,340	7,380
2006:				
January	271	149	201	621

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Includes metal powder.

<sup>3</sup>Data may include other cobalt materials.

<sup>4</sup>Data based on monthly reports.

TABLE 2  
U.S. REPORTED CONSUMPTION OF COBALT, BY END USE<sup>1</sup>

(Metric tons, contained cobalt)

End use	2005		2006
	January	January- December <sup>2</sup>	January
Steel	50	598	50
Superalloys	286	3,300	287
Magnetic alloys	19	235	21
Other alloys <sup>3</sup>	W	W	W
Cemented carbides <sup>4</sup>	68	762	63
Chemical and ceramic uses <sup>5</sup>	179	2,210	177
Miscellaneous and unspecified	23	271	23
Total	624	7,380	621

W Withheld to avoid disclosing company proprietary data; included with "Miscellaneous and unspecified."

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Data based on monthly reports.

<sup>3</sup>Includes nonferrous alloys, welding materials, and wear-resistant alloys.

<sup>4</sup>Includes diamond tool matrices, cemented and sintered carbides, and cast carbide dies or parts.

<sup>5</sup>Includes catalysts, driers in paints or related usages, feed or nutritive additives, glass decolorizer, ground coat frit, pigments, and other uses.

TABLE 3  
U.S. REPORTED STOCKS OF COBALT MATERIALS<sup>1</sup>

(Metric tons, contained cobalt)

Period	Industry <sup>2</sup>			Total	U.S. Government, metal <sup>5</sup>
	Metal <sup>3</sup>	Oxide and other chemical compounds <sup>4</sup>	Scrap		
2005:					
January	347	200	107	654	2,590
February	349	210	108	667	2,540
March	344	195	105	643	2,340
April	341	208	110	659	2,220
May	351	199	108	658	2,180
June	347	186	101	634	2,070
July	370	201	114	684	1,930
August	341	191	132	664	1,870
September	353	187	132	672	1,810
October	340	180	132	653	1,670
November	326	182	132	641	1,560
December	330	179	132	641	1,550
2006:					
January	343	176	132	652	1,520

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Stocks reported by cobalt processors and consumers.

<sup>3</sup>Includes metal powder.

<sup>4</sup>Data may include other cobalt materials.

<sup>5</sup>Data from Defense National Stockpile Center. Includes material committed for sale pending shipment.

TABLE 4  
U.S. IMPORTS FOR CONSUMPTION OF COBALT, BY COUNTRY<sup>1</sup>

(Kilograms, gross weight of material, except as noted)

Period and country of origin	Metals <sup>2</sup>		Oxides and hydroxides		Salts and compounds <sup>3</sup>		Total cobalt content for the month <sup>5</sup>	Cobalt content, year to date <sup>5, 6</sup>
	Quantity	Value <sup>4</sup>	Quantity	Value <sup>4</sup>	Quantity	Value <sup>4</sup>		
2004:								
December:	907,000	\$35,300,000	90,400	\$3,020,000	175,000	\$2,290,000	1,030,000	8,720,000
January-December	7,250,000	311,000,000	1,300,000	45,100,000	1,720,000	22,100,000	8,720,000	XX
2005:								
January	727,000	27,000,000	128,000	4,010,000	230,000	2,860,000	897,000	897,000
February	892,000	35,600,000	95,400	2,660,000	191,000	2,730,000	1,030,000	1,930,000
March	544,000	21,000,000	183,000	5,640,000	215,000	2,690,000	747,000	2,680,000
April	818,000	29,800,000	75,100	1,950,000	98,600	1,230,000	907,000	3,590,000
May	885,000	29,900,000	87,600	2,570,000	173,000	1,660,000	1,000,000	4,580,000
June	904,000	30,100,000	91,600	2,620,000	187,000	2,050,000	1,030,000	5,620,000
July	712,000	22,600,000	119,000	2,920,000	120,000	1,130,000	835,000	6,450,000
August	829,000	23,900,000	82,500	2,210,000	150,000	1,690,000	946,000	7,400,000
September	846,000	26,800,000	113,000	2,770,000	167,000	1,400,000	980,000	8,380,000
October	846,000	26,500,000	111,000	2,610,000	237,000	2,640,000	1,010,000	9,390,000
November	971,000	28,300,000	116,000	2,790,000	158,000	1,840,000	1,120,000	10,500,000
December:								
Australia	46,800	1,550,000	--	--	--	--	46,800	313,000
Belgium	8,660	322,000	42,900	1,050,000	--	--	39,500	768,000
Brazil	20,000	504,000	--	--	--	--	20,000	305,000
Canada	37,000	1,120,000	--	--	--	--	37,000	818,000
China	9,300	373,000	2,000	38,600	90,500	860,000	45,300	970,000
Colombia	--	--	--	--	--	--	--	527
Congo (Kinshasa)	4,980	91,800	--	--	--	--	4,980	24,900
Finland	5,400	153,000	28,400	544,000	93,200	1,310,000	65,600	1,190,000
France	277	20,000	5,190	140,000	--	--	4,020	48,500
Germany	--	--	--	--	--	--	--	8,940
Hong Kong	--	--	--	--	--	--	--	5,280
India	2,470	157,000	--	--	49,400	297,000	15,800	123,000
Japan	15,900	547,000	--	--	--	--	15,900	225,000
Korea, Republic of	--	--	--	--	--	--	--	23,800
Morocco	20,000	507,000	--	--	--	--	20,000	342,000
Norway	35,900	934,000	--	--	--	--	35,900	2,670,000
Philippines	--	--	--	--	28,900	247,000	9,010	33,700
Russia	98,700	2,860,000	--	--	--	--	98,700	1,700,000
South Africa	9,930	217,000	--	--	--	--	9,930	228,000
Sweden	--	--	--	--	--	--	--	7,310
Switzerland	--	--	--	--	--	--	--	3
Taiwan	--	--	--	--	1,000	10,700	240	1,980
Uganda	--	--	--	--	--	--	--	60,300
United Kingdom	3,600	143,000	29,000	604,000	8,260	126,000	26,700	258,000
Zambia	59,800	1,530,000	--	--	--	--	59,800	936,000
Total	379,000	11,000,000	108,000	2,380,000	271,000	2,850,000	555,000	11,100,000
January-December	9,350,000	312,000,000	1,310,000	35,100,000	2,200,000	24,800,000	11,100,000	XX

XX Not applicable. -- Zero.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Unwrought cobalt, excluding alloys; includes cobalt cathode and cobalt metal powder; may include intermediate products of cobalt metallurgy.

<sup>3</sup>Includes cobalt acetates, cobalt carbonates, cobalt chlorides, and cobalt sulfates.

<sup>4</sup>Customs value.

<sup>5</sup>Estimated from gross weights.

<sup>6</sup>May include revisions to prior months.

Source: U.S. Census Bureau, with adjustments by the U.S. Geological Survey.

TABLE 5  
U.S. IMPORTS FOR CONSUMPTION OF ADDITIONAL COBALT MATERIALS, BY COUNTRY <sup>1</sup>

(Kilograms, gross weight of material, except as noted)

Period and country of origin	Unwrought cobalt alloys		Cobalt waste and scrap		Wrought cobalt and cobalt articles	
	Quantity	Value <sup>2</sup>	Quantity	Value <sup>2</sup>	Quantity	Value <sup>2</sup>
2004:						
December	1,650	\$76,700	93,600	\$815,000	27,500	\$1,990,000
January-December	75,500	3,210,000	1,020,000	10,900,000	230,000	15,400,000
2005:						
January	5,110	190,000	72,000	463,000	12,400	938,000
February	89	16,700	24,100	380,000	18,800	1,360,000
March	1,100	52,200	82,000	887,000	15,800	1,100,000
April	1,080	65,100	47,400	571,000	31,700	2,030,000
May	11,100	348,000	75,400	845,000	21,300	1,550,000
June	500	33,000	120,000	1,060,000	20,500	1,540,000
July	1,990	95,700	17,100	276,000	27,300	1,730,000
August	675	42,800	91,800	856,000	12,400	1,060,000
September	23,500	711,000	42,700	495,000	18,300	1,150,000
October	10,700	372,000	88,200	594,000	18,700	1,520,000
November	10,100	410,000	100,000	1,090,000	36,900	2,190,000
December:						
Belgium	--	--	--	--	11	7,310
Canada	--	--	21,700	101,000	2,510	415,000
China	--	--	--	--	122	14,100
Finland	227	14,900	--	--	--	--
France	--	--	--	--	122	44,000
Germany	--	--	--	--	1,310	179,000
Ireland	--	--	8,350	123,000	--	--
Japan	--	--	1,900	32,200	1,500	97,700
Singapore	--	--	396	6,110	--	--
Tunisia	--	--	2,130	32,300	--	--
United Kingdom	35,000	335,000	19,100	67,900	16,200	757,000
Total	35,200	350,000	53,600	363,000	21,700	1,510,000
January-December	101,000	2,690,000	815,000	7,880,000	256,000	17,700,000

-- Zero.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Customs value.

Source: U.S. Census Bureau.

TABLE 6  
U.S. EXPORTS OF COBALT MATERIALS<sup>1</sup>

(Kilograms, gross weight of material, except as noted)

Period	Unwrought cobalt, powders, matte, waste and scrap <sup>2</sup>		Oxides and hydroxides		Salts and compounds <sup>3</sup>		Total cobalt content for the month <sup>5</sup>	Cobalt content, year to date <sup>5, 6</sup>
	Quantity	Value <sup>4</sup>	Quantity	Value <sup>4</sup>	Quantity	Value <sup>4</sup>		
2004:								
December	130,000	\$4,350,000	7,690	\$180,000	56,000	\$381,000	149,000	2,500,000
January-December	2,110,000	79,400,000	324,000	13,800,000	666,000	5,490,000	2,500,000	XX
2005:								
January	122,000	5,590,000	27,300	596,000	59,600	398,000	156,000	156,000
February	120,000	3,990,000	52,200	1,610,000	118,000	363,000	186,000	342,000
March	107,000	4,650,000	57,500	1,260,000	145,000	489,000	183,000	525,000
April	154,000	6,380,000	36,900	862,000	36,500	380,000	189,000	714,000
May	207,000	5,980,000	93,500	2,250,000	36,600	205,000	283,000	998,000
June	170,000	5,710,000	107,000	1,860,000	26,300	217,000	253,000	1,250,000
July	174,000	5,280,000	39,700	818,000	75,200	621,000	221,000	1,470,000
August	170,000	5,560,000	25,500	581,000	18,900	137,000	193,000	1,660,000
September	108,000	4,050,000	154,000	1,780,000	30,400	229,000	226,000	1,890,000
October	147,000	6,240,000	68,000	1,610,000	18,400	119,000	201,000	2,090,000
November	103,000	4,030,000	57,700	1,480,000	88,900	390,000	166,000	2,260,000
December	90,100	3,130,000	110,000	2,410,000	49,200	275,000	181,000	2,440,000
January-December	1,670,000	60,600,000	829,000	17,100,000	704,000	3,820,000	2,440,000	XX

XX Not applicable.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>May include other intermediate products of cobalt metallurgy and unwrought cobalt alloys.

<sup>3</sup>Cobalt acetates and cobalt chlorides.

<sup>4</sup>Free alongside ship (f.a.s.) value.

<sup>5</sup>Estimated from gross weights.

<sup>6</sup>Year to date may include revisions to prior months.

Source: U.S. Census Bureau, with adjustments by the U.S. Geological Survey.

TABLE 7  
U.S. EXPORTS OF WROUGHT COBALT, COBALT ORE,  
AND CONCENTRATES<sup>1</sup>

(Kilograms, gross weight of material, except as noted)

Period	Wrought cobalt and cobalt articles		Cobalt ore and concentrates	
	Quantity	Value <sup>2</sup>	Quantity	Value <sup>2</sup>
2004:				
December	85,300	\$4,620,000	25,300	\$60,100
January-December	1,150,000	48,400,000	917,000	20,600,000
2005:				
January	184,000	6,490,000	69,000	2,800,000
February	235,000	8,710,000	8,390	254,000
March	147,000	6,540,000	40,700	556,000
April	184,000	6,530,000	33,000	818,000
May	129,000	6,080,000	49,200	1,300,000
June	230,000	9,230,000	36,200	1,200,000
July	224,000	8,410,000	--	--
August	213,000	7,950,000	242,000	1,870,000
September	147,000	6,370,000	139,000	1,720,000
October	222,000	8,360,000	41,800	1,050,000
November	216,000	8,370,000	--	--
December	204,000	8,800,000	69,200	562,000
January-December	2,340,000	91,800,000	729,000	12,100,000

-- Zero.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Free alongside ship (f.a.s.) value.

Source: U.S. Census Bureau, with adjustments by the U.S. Geological Survey.